Alistair Everett

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Interdisciplinary Research Scientist with experience in high resolution fluid dynamics modelling and a background in engineering. Skills in scientific programming, primarily with Python, and experience compiling and running codes in a linux environment and on high performance computing clusters. Interests and developing skills in data science and machine learning.

Present

Present – 2016-09 **Research Scientist** - Norwegian Polar Institute, Norway
- Finite element fluid dynamics modelling of meltwater plumes at Kronebreen, Svalbard.
- Applying model to real terminus geometries from sideways sonar scans of an ice front.
- Developing simplified plume parameterisations for large-scale ocean models.
- Analysis of seal-collected oceanographic data and dive locations around plumes.

Experience

2016-08 – 2013-01 **PhD** - Swansea University Glaciology Group, UK
Thesis Title: Observing and Modelling Meltwater at the Termini of Tidewater Glaciers
- Developed existing fluid dynamics code (F90) to model plumes at tidewater glaciers.
- Compiled and ran model on local and national HPC clusters.
- Developed Python code to model water-driven fracture on glaciers.
- Automatic classification of surface meltwater using MODIS and Landsat imagery.
- Analysis of observational plume data including LiDAR and timelapse imagery.
- Taught on modules including Geographic Information Systems and Research Methods.

2012-12 – 2011-10 **Graduate Bridges and Design Engineer** - North Yorkshire County Council, UK
- Positions in Highways Operations and Bridges and Design Services.
- Project managed four projects with budgets up to £160,000 each.

2011-09 – 2011-07 **Research Assistant** - University of Bath, UK
- Development of a rotating three-dimensional fluid dynamics simulation of a turbine.
- Used C++ and Matlab to automatically generate geometries and optimise power output.

Education

2011-07 – 2007-09 **MEng (Hons) Civil Engineering** - University of Bath, UK
Dissertation: Experimental Investigations on Thermohaline Circulation

Programming Skills

	Software/Environments	**Languages**
Experienced (> 2 years)	Linux, Windows, Quantum GIS, LaTeX, Git, High Performance Computing	Python (numpy, scipy, pandas, scikit-learn), Fortran, MATLAB
Familiar (< 2 years)	ArcMap, node.js, Tensorflow, Keras, AWS, Heroku, Spark	C++, HTML, CSS, Javascript, Bash

Courses

2017-10	Norskkurs (A2) - Folkeuniversitetet, Tromsø
2018-10	Machine Learning A-Z: Hands-On Python & R In Data Science - Udemy [online]
2018-04	Python for Data Science and Machine Learning - Udemy [online]
2017-10	Norskkurs (A1) - Multilingo, Tromsø
2014-09	Fluid Dynamics Summer School (FDSE) - University of Cambridge, UK
2014-08	International Summer School in Glaciology - McCarthy, Alaska, USA
2014-02	AG-825 Glaciology Course - University Centre in Svalbard, Norway
2014-01	Communicating Science - Science Museum London, UK

Other Experience

2018-04	Austfonna Glacial Mass Balance Field Program - Nordaustlandet, Svalbard
2017-04	British Stauning Alps Expedition 2017 - East Greenland
2013-06 – 2013-09	Field Assistant - Sermilik Fjord, South East Greenland
2009–2011	Club President - Bath University Mountaineering Club

Grants and Awards

2017-11	Svalbard Science Conference - Best Early Career Researcher Poster
2017-04	Stauning Alps Expedition (Various grants totalling: £ 22 383)
2015-12	Swansea University Team Maker Competition 2015 (First Prize)
2015-10	NERC High Performance Computing Grant (£ 5 600)
2015–2013	7 travel and development bursaries (Various grants totalling £ 3 500)

Scientific Publications

Lead:	**Everett, A.** *et al.* (2018) Subglacial discharge plume behaviour revealed by CTD-instrumented ringed seals, *Nature: Scientific Reports*.
	Everett, A. *et al.* (2016) Water Levels in Crevasses Controlled by Basal Water Pressures at Helheim Glacier, South East Greenland, *Journal of Geophysical Research: Earth Surface*.
Co-author:	**Vallot, D.** *et al.* (2018) Effects of undercutting and sliding on calving: a coupled approach applied to Kronebreen, Svalbard, *The Cryosphere*.
	Moloney, V. *et al.* (2016) Investigation of wind and tidal forcing on stratified flows in Greenland fjords with TELEMAC-3D, *European Journal of Computational Mechanics*.

Additional Qualifications

Mountain First Aid, Crevasse Rescue, PADI Open Water Diver Certification, Full Clean UK Driving License, intermediate Norwegian, basic German and French.